

IN THE CLAIMS

Claims 1-8 are pending. Claim 3 has been cancelled without prejudice or disclaimer.
Claims 1, 2 and 4-8 and have been amended as follows:

Claim 1. (Currently Amended) A numerically controlled reciprocating submersible pump apparatus, comprising a sieve tube, a drive and a pump, the whole apparatus ~~is capable of being~~ placed in an underground oil ~~reservoirs~~reservoir; ~~The~~wherein the drive consists of a stator having an upper end and a lower end and a reciprocating head with iron cores inside the stator; ~~The~~the stator and the reciprocating head form a friction couple via ~~the~~ supporting guides and the reciprocating head iron cores; ~~Characterized~~characterized in that, with an airtight cavity, the ~~stator's upper end~~ of the stator is connected to ~~the pump's a lower end~~ of the pump through the sieve tube; ~~The~~the pump is connected to ~~the~~an oil tube; ~~The~~the stator's lower end is connected to ~~the~~a balancing sieve tube, ~~the~~an end plug and ~~the~~an end coupler of the drive serially.

Claim 2. (Currently Amended) The numerically controlled reciprocating submersible pump apparatus, according to claim 1, characterized in that there are many circular iron core winding groups comprising circular iron cores and circular windings inside ~~the~~a stator frame with the supporting guides between the winding groups; ~~The~~the circular iron cores and the circular windings are arranged next to each other, ~~There~~there are seal bushings on ~~the~~ circular inside surfaces of the circular iron cores and circular windings; ~~The~~the seal bushings are connected to ~~the~~ endcovers; ~~All~~and all these form the airtight cavity.

Claim 3. (Canceled).

Claim 4. (Currently Amended) The numerically controlled reciprocating submersible pump apparatus, according to claim 2, characterized in that the supporting guides are circular, made from alloy; and have ~~The~~ circular inside surfaces ~~are~~ made from alloy; ~~The~~the supporting guides

have smaller inside diameters than the seal bushings.

5. (Currently Amended) The numerically controlled reciprocating submersible pump apparatus, according to claim 1, characterized in that the reciprocating head's iron cores are circular and around ~~the reciprocating head's~~ a solid shaft of the reciprocating head with permanent magnets between the circular iron cores; ~~The~~ and the circular iron cores' outside surfaces are made from alloy and ~~they~~ form a friction couple with the supporting guides via ~~the~~ alloy layers on ~~the~~ inside surfaces of the supporting guides.

Claim 6. (Currently Amended) The numerically controlled reciprocating submersible pump apparatus, according to claim 5, characterized in that the permanent magnets are equally spaced between the reciprocating head's circular iron cores; ~~The~~ and the magnets have smaller outside diameters than the circular iron cores.

Claim 7. (Currently Amended) The numerically controlled reciprocating submersible pump apparatus, according to claim 1, characterized in that there is a pump housing outside ~~the~~ a pump cylinder of the pump, forming a circular space between them for sand residue; ~~The~~ and a plunger push rod of the pump is connected to ~~the reciprocating head shaft's~~ an upper end of a solid shaft of the reciprocating head of the drive through the sieve tube.

Claim 8. (Currently Amended) The numerically controlled reciprocating submersible pump apparatus, according to claim 1, characterized in that the oil tube leads to ~~the~~ ground surface; and ~~Windings' terminal from~~ the stator is connected to ~~the~~ power terminals of an overground numerical control unit.